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U. S. Department of Agriculture

Notes on Trial Sets of Dutch
Bulbs Purchased for Congressional
Distribution, April, 1912.

Leon M. Estabrook.
iii

UNITED STATES DEPARTMENT OF AGRICULTURE,
BUREAU OF PLANT INDUSTRY.

OFFICE OF SEED DISTRIBUTION.

Washington, D. C.,

: N O T E S :
:
: ON TRIAL SETS :
:
: OF DUTCH BULBS :
:
: PURCHASED FOR :
:
: CONGRESSIONAL :
:
: DISTRIBUTION, :
:
: APRIL, 1912. :

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY

Washington, D. C.

THE
PLANT
INDUSTRY
BUREAU
OF THE
DEPARTMENT
OF AGRICULTURE
WASHINGTON, D. C.

4/1/12.

Notes on Dutch Bulbs Purchased for the Congressional Distribution, on the Grounds of the Department, Imported by Messrs. W.W. Tracy, Sr., J.E.W. Tracy, and L.M. Estabrook, April 12, 1912.

HYACINTHS

Sir J. Lawrence:

1000 at \$48 from Gt. Van Naveren, Bellingham. None on the Trial Grounds.

King of the Blues:

(1) 2000 at \$45 from Rynders Bros. Lisse, Dep.

(a) Circular beds of 12 inches in diameter of sized bells and truss of indigo blue. Fairly of bed affected by disease condition, as south of the diseased portion of 8 inches. The spike when 2 or 3 inches on examination is found to be festinating loosely the foliage, having been broken or pushed off by growing flower stems. Some of these plants the flower stalk appear to have formed a new bud which may push out.

Epaminondas (Deep pink)

Emperor

White Hawk

Keizerkroon

Main Bldg.

White Hawk

N. Poeticus Dairy

Entomology

King of Blues

Grace Darling

Epaminondas

West

Wing

Keizerkroon

Boiler

Golden Queen

Rose de Holland

Morena

N. Poeticus

Lunch

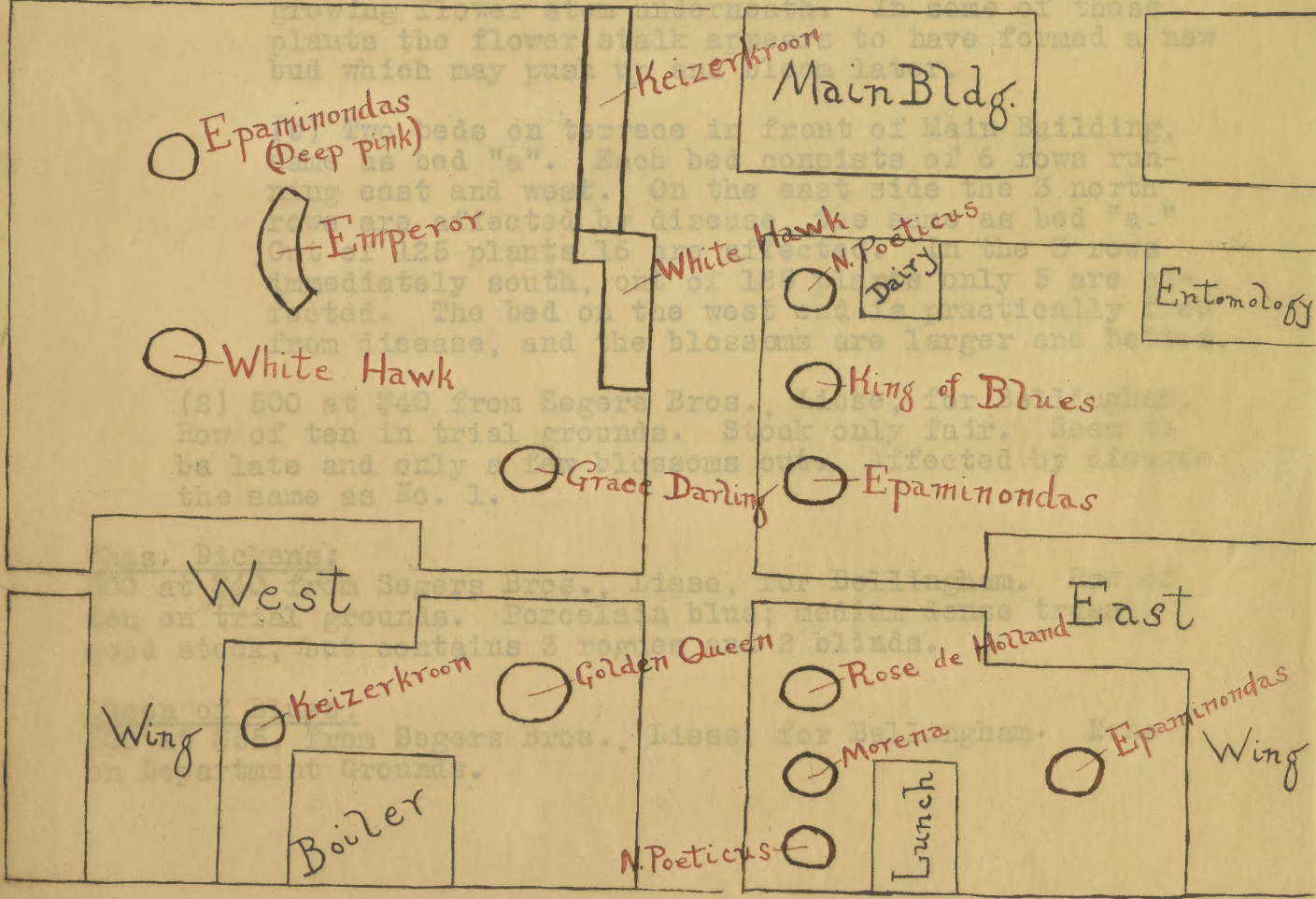
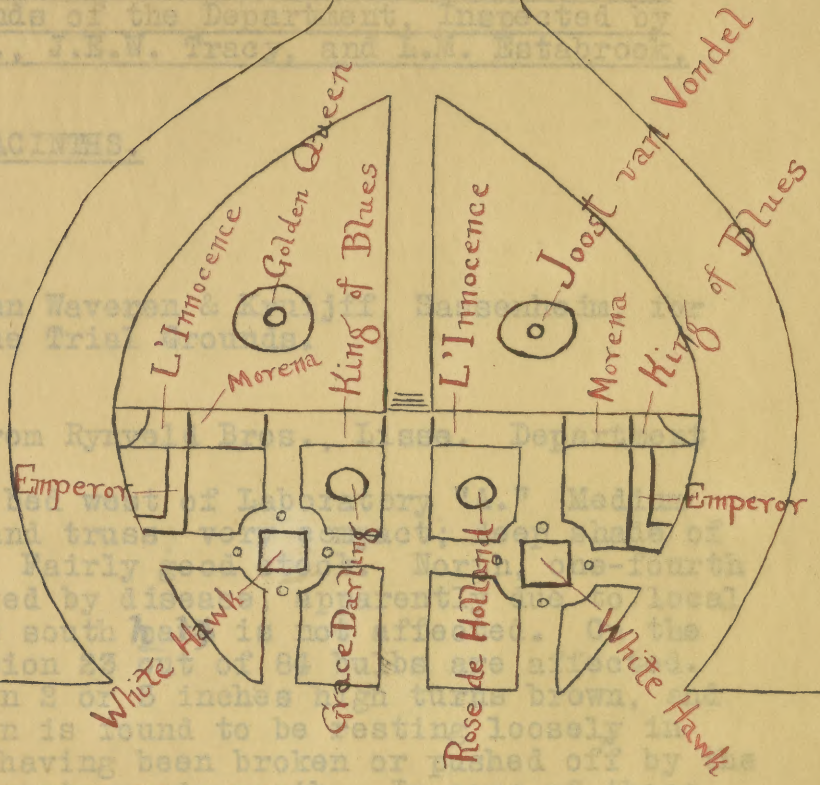
East

Epaminondas

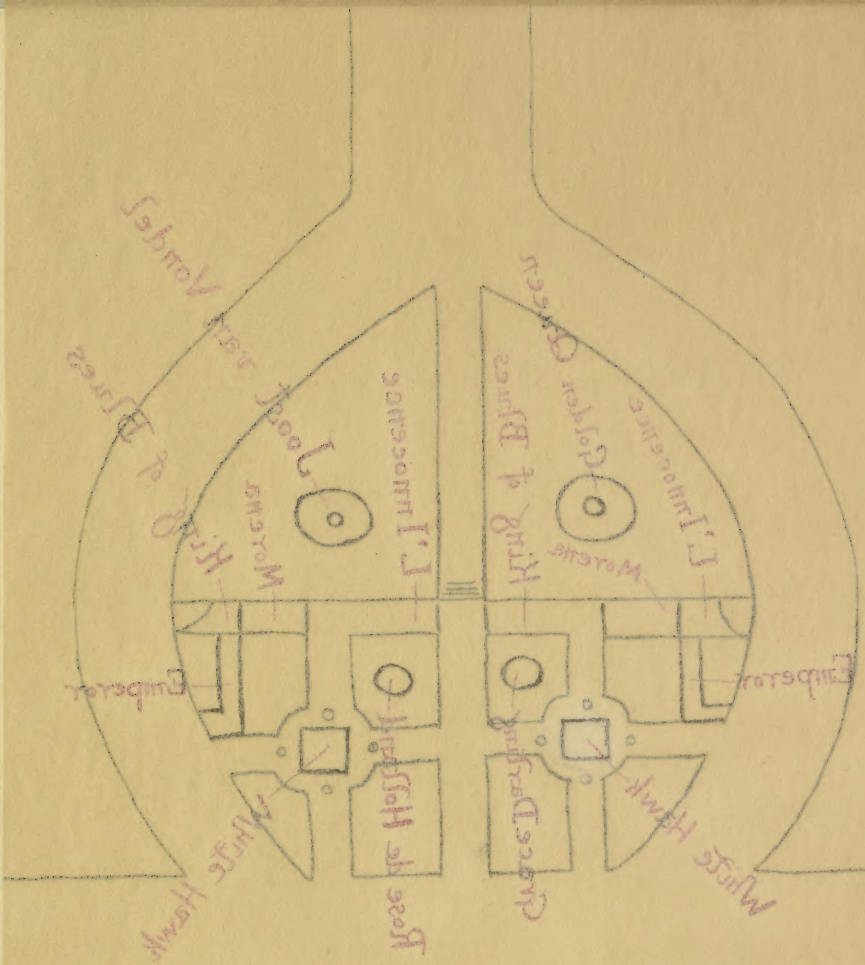
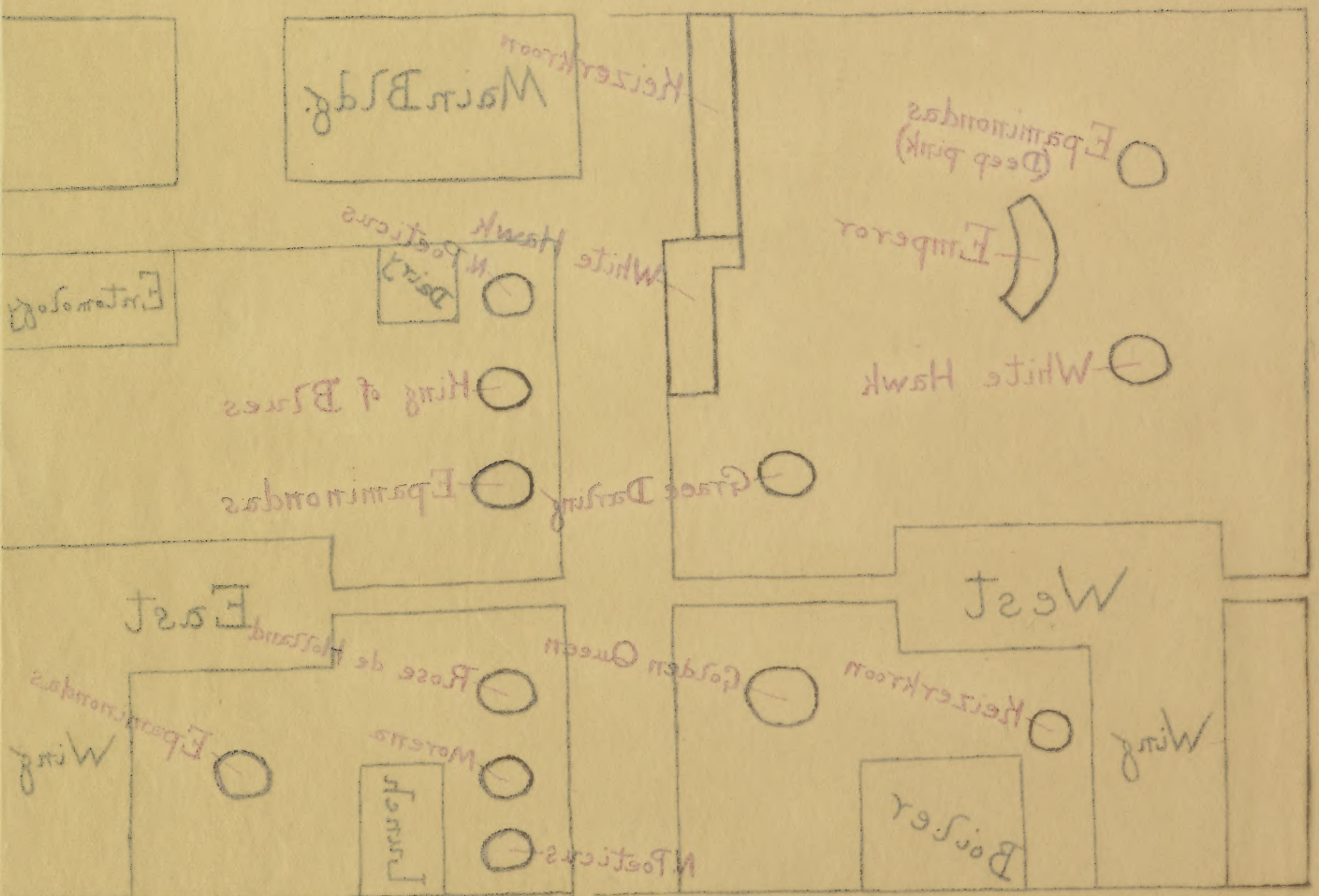
Wing

B Street

14th Street



B Street



Notes on Dutch Bulbs Purchased for the Congressional Distribution, on the Grounds of the Department, Inspected by Messrs. W.W. Tracy, Sr., J.E.W. Tracy, and L.M. Estabrook, April 12, 1912.

HYACINTHS.

Blue

Sir J. Lawrence:

1000 at \$48 from Gt. Van Waveren & Kruijff, Sassenheim, for Bellingham. None on the Trial Grounds.

King of the Blues:

(1) 2000 at \$45 from Rynveld Bros., Lisse. Department Grounds.

(a) Circular bed west of Laboratory "A." Medium sized bells and truss, very compact; deep shade of indigo blue. Fairly good stock. North, one-fourth of bed affected by disease, apparently due to local condition, as south ~~half~~ is not affected. On the diseased portion 23 out of 84 bulbs are affected. The spike when 2 or 3 inches high turns brown, and on examination is found to be resting loosely in the foliage, having been broken or pushed off by the growing flower stem underneath. In some of these plants the flower stalk appears to have formed a new bud which may push up and bloom later.

(b) Two beds on terrace in front of Main Building, same as bed "a". Each bed consists of 6 rows running east and west. On the east side the 3 north rows are affected by disease, the same as bed "a." Out of 125 plants 16 are affected. In the 3 rows immediately south, out of 125 plants only 5 are affected. The bed on the west end is practically free from disease, and the blossoms are larger and better.

(2) 500 at \$40 from Segers Bros., Lisse, for Bellingham. Row of ten in trial grounds. Stock only fair. Seem to be late and only a few blossoms out. Affected by disease the same as No. 1.

Chas. Dickens:

500 at \$40 from Segers Bros., Lisse, for Bellingham. Row of ten on trial grounds. Porcelain blue; medium dense truss; good stock, but contains 3 rogues and 2 blinds.

Queen of Blues:

500 at \$55, from Segers Bros., Lisse, for Bellingham. None on Department Grounds.

THE UNIVERSITY OF CHICAGO
DIVISION OF THE PHYSICAL SCIENCES
DEPARTMENT OF CHEMISTRY

REPORT

Submitted by: [Name]
Date: [Date]

Topic: [Topic]

The purpose of this experiment was to determine the effect of [variable] on the rate of reaction between [reactant 1] and [reactant 2]. The reaction was carried out under conditions of constant temperature and pressure. The rate of reaction was measured by the change in concentration of [product] over time. The results of the experiment are shown in the table below.

It was found that the rate of reaction increased as the concentration of [reactant 1] increased. This is consistent with the law of mass action, which states that the rate of a chemical reaction is proportional to the product of the concentrations of the reactants. The order of reaction with respect to [reactant 1] was determined to be [order].

The activation energy of the reaction was determined to be [value] kJ/mol. This value is in good agreement with the value reported in the literature for this reaction.

The following table shows the experimental data for the reaction of [reactant 1] and [reactant 2] at a constant temperature of [temperature].

Concentration of [reactant 1] (M) Time (s) Concentration of [product] (M)

Enchantress:

3000 at \$60, from Segers Bros., Lisse, for Bellingham. Row of 10 on trial grounds. Fine shade of delicate porcelain blue. Medium sized bells on compact truss. Resembles Grand Lilas; very attractive; good stock.

Gen. Hancock:

1500 at \$44, from Verdegaal, Noordwijkerhouts, for Bellingham. Row of ten on trial grounds. Light Blue florets; large truss. Looks especially well in mass at a distance. Mr. Tracy, Sr., considers this variety superior to Lord Derby. Good stock.

Lord Derby:

1000 at \$45, from Rynveld Bros., Lisse, for Bellingham. Row of 10 on trial grounds. Pale blue florets on large truss. Same shade as General Hancock, but does not look quite so well in the mass. Good for cut flowers. Good stock.

Grand Maitre:

Row of 10 on trial grounds labelled, "Grand Maitre, Rynveld," but no record of any order. Florets deep blue; large compact truss. Very attractive and good stock.

Purple or Lilac

Grand Lilas:

500 at \$50, from Segers Bros., Lisse, for Bellingham, in row of 10 on trial grounds. Dark blue or lilac. Large bells and truss, which is erect. Good stock, but not as attractive as Enchantress.

Pink

Gigantea:

500 at \$40 from Gt. Van Waveren, Sassenheim, for Bellingham. Row of 10 on trial grounds. Medium sized bells. Very pure and attractive shade of light pink. Large, compact, erect truss. Good stock, and no blinds.

Chas. Dickens:

500 at \$55 from Rynveld Bros., Lisse, for Bellingham. Row of 10 on trial grounds. Small bells. Fine, uniform reddish pink on upright compact truss. Good stock, and no blinds.

Gertrude:

500 at \$35 from Segers Bros., Lisse, for Bellingham. Row of 10 on trial grounds. Pure shade of deep reddish pink. Bells of medium size on large, compact, erect truss. Very good stock. No blinds or disease.



Norma:

500 at \$45 from Segers Bros., for Bellingham. Row of 10 on trial grounds. Pale waxy pink. Large bells and very large truss. Similar to Moreno, but color better. Truss more erect, but still inclined to fall over without stakes. Second blossoms starting as first blossom matures. Good stock.

Baron Von Thuyll:

1000 at \$40 from Verdegaal, Noordwijkerhouts, for Bellingham. Row of 10 on trial grounds. Deep flesh pink. Not very good; several blinds. Some of the buds affected in same manner as King of the Blues. Stock only fair.

Moreno:

(1) 2000 at \$45 from Segers Bros., Lisse, for Department Grounds.

(a) Circular bed west of Laboratory "A." Classed as red but color is pale, waxy pink; not very attractive and almost identical with Norma. Very large bells and exceptionally large truss, but weak and has to be staked. The second blossom comes before first one is out of the way. Of 100 which were counted none were found without a second blossom. Good stock. Mr. Tracy, Sr., thinks this an excellent variety for distribution. Its unsatisfactory bleached-out color and tendency to lay down are against it.

(b) Two beds on upper terrace next to stone balustrade in front of Main Building, same as "a."

(2) 1000 at \$56, from Gt. Van Waveren, Sassenheim, for Bellingham. Row of 10 on trial grounds. Same as No. 1. Stock is good but no better than the stock from Segers Bros. at \$45.

Red

Moreno:

Erroneously classed as red (see under pink).

Roi des Belges:

1000 at \$45 from Rynveld Bros., Lisse, for Bellingham. Row of 10 on trial grounds. Pleasing shade of bright red; medium sized bells; medium sized compact truss, very erect. Good stock and fine quality. Best red on the grounds.

Robert Steiger:

1000 at \$42.50 from Segers Bros., Lisse, for Bellingham. Row of 10 on trial grounds. Lighter shade of red and similar to Roi des Belges, but not as attractive. Good stock.

White

L'Innocence:

(1) 2000 at \$50 from Segers Bros., Lisse, for Department Grounds. Two long beds next to stone balustrade in front of Main Building. Pure white. Large bells and truss, compact and erect. Very attractive. The best white hyacinths on the grounds. Good stock, free from disease. No sign of green. No blinds and second blossom comes after first flower has matured.

(2) 500 at \$50, from Segers Bros., for Bellingham. Row of 10 on trial grounds. Same as No. 1.

La Grandesse:

500 at \$60 from Segers Bros., Lisse, for Bellingham. Row of 10 on trial grounds. Pure white; large bells; large truss, but the truss shows green at the tip. Not as attractive as L'Innocence. Good stock.

British Queen:

1000 at \$55, from Segers Bros., Lisse, for the Bellingham Garden. Row of 10 on the trial grounds. Very attractive white, with trace of cream yellow. Large bells and compact truss. One of the best whites. Good stock. Free from disease and no blinds.

Mont Blanc:

1000 at \$64, from Gt. Van Waveren, Sassenheim, for Bellingham. Row of 10 on the trial grounds. Pure white; medium sized bells and truss. Good stock but not as attractive as L'Innocence.

Grand Vainqueur:

1000 at \$41.60, from Gt. Van Waveren for Bellingham. Row of 10 on the trial grounds. Pure white; medium sized bells; large truss; but weak and falls down. Not as good as the other whites.

Lady Plimsoll:

1000 at \$50 from Gt. Van Waveren for Bellingham. Row of 10 on the grounds. Pinkish white; bells; large truss. Good stock, but color unsatisfactory, as it is neither pink nor pure white.

Alba Maxima:

1000 at \$48, from Gt. Van Waveren, for Bellingham. Row of 10 on the trial grounds. Very good; pure white; large bells; erect truss. One of the best whites.

Alba Superbissima:

500 at \$50, Segers Bros., Lisse, for Bellingham. Row of 10 on the grounds. Pure white; large bells and truss. Vigorous grower, but has green tips. Good for bedding but not for pots. Good stock, but not as good as Alba Maxima.

Snowball:

1000 at \$60 from Rynveld Bros., Lisse, for Bellingham. Row of 10 on trial grounds. Very good, but no better than L'Innocence and British Queen. Good stock.

Paix de L'Europe:

1000 at \$40 from Rynveld Bros., Lisse, for Bellingham. Row of 10 on trial grounds. Purest white of any on the grounds. Medium sized bells; good truss. Stock only fair, lacking in uniformity; some spikes dense and others open. Two blinds.

Baroness von Thuyll:

1000 at \$40 from Verdegaaal, for Bellingham. Row of 10 on trial grounds. Pure white, large bells and truss; but weak; several blinds.

Madam van der Hoop:

500 at \$40 from Segers Bros., for Bellingham. White, large bells and truss, but shows green at the tip. Better for bedding than for pots. Good stock but not as attractive as L'Innocence or British Queen.

April 17, 1912.

Memorandum re Diseased Condition of Hyacinths, King of Blues.

Mr. G. Hylkema of Van Zanten Bros., Lisse, Holland, was in the office, and in conversation regarding the condition of hyacinth, King of the Blues, on the north side of beds on the Department Grounds, where it was found that the blossoms died and became detached from the plant when about 2 inches high, he said that there was no doubt that this condition was due to freezing in the winter. He said this condition was of rather frequent occurrence in Holland whenever the hyacinths are not properly protected. The soil about the bulb becomes frozen, hard, thaws from the top, and the alternating cold and warm temperatures to which the flower bud is subjected kills it, and the growing foliage lifts the dead bud out of the ground.

April 16, 1912.

TULIPS

Crimson

Joost Von Vondel:

2500 at \$8 from DeGraaf Bros., Leiden, Holland, for Department Grounds. Circular bed on lower terrace in front of Main Building. April 12, beginning to bloom. April 16, in full bloom. Deep crimson fringed with white. Stock only fair. Blooms not uniform, many showing splashes or streaks of white. Petals narrow and pointed. Not enough defects to justify deduction in settlement, but firm should be advised that stock is not satisfactory.

Duc van Thol:

Purchased from Thorburn for shortage in Congressional Distribution. None on trial grounds.

Crimson King:

16050 at \$3.50 from Rene Schoo, Hillegom, for Congressional Distribution.

(a) Row of 20 on trial grounds. Dark crimson. Stock very poor. Out of 20 plants 3 were blind and 1 weak or imperfectly developed. Lacking in uniformity, and makes very poor showing. Petals narrow and pointed.

(b) Row of 10 at Cleveland Park (Mr. Tracy) also very weak. Only 6 blossoms with 2 blinds, and 2 did not grow. Deduct 10 per cent for unsatisfactory quality.

Grace Darling:

25000 at \$16 from DeGraaf Bros., Leiden, for Department Grounds. Circular bed east of Laboratory B, and circular bed on west side of upper terrace in front of Main Building. Bright scarlet petals; well rounded and of good substance; large open cup with golden center. Out of 300 counted only 5 were blinds, and no sign of disease. Fine quality and very satisfactory.

Scarlet

Artus:

(1) Baartman & Koning, Sassenheim--4000 at \$3 for Bellingham. None on trial grounds.

(2) DeGraaf, Leiden--7500 at \$4 for Congressional Distribution.

(a) Row of 10 on trial grounds. Just beginning to bloom, April 16. Stock only fair.

(b) Row of 10 at Cleveland Park (Mr. Tracy). All in bloom except 2 blinds. Good form, color and substance, and fairly good stock.

50 51

(3) Rynveld Bros., Lisse--4000 at \$3.50, for Congressional Distribution.

(a) Row of 10 on trial grounds. Not in bloom, April 16. Foliage small and late.

(b) Row of 10 at Cleveland Park (Mr. Tracy). All in bloom, but 3 days later than Virginia-grown, and not as good. Too soon to determine whether deduction should be made. Apr. 21, improved in last few days as to size and color. Equal now to other imported

(4) Verdegaal, Noordwijkerhouts--4600 at \$3.40, for Congressional Distribution.

(a) Row of 10 on trial grounds. Only about half beginning to bloom; apparently good stock but late.

(b) Row of 10 at Cleveland Park (Mr. Tracy). All in bloom. Not as vigorous or as good quality as the Virginia-grown, but similar to those from DeGraaf.

(5) Hubert Bulb Co., Portsmouth, Va.--100 at \$9.25, for shortage in Congressional Distribution.

(a) Row of 10 on Trial Grounds. Nearly all in bloom. Three days to a week earlier than imported bulbs of same variety. Good stock.

(b) Row of 20 at Cleveland Park (Mr. Tracy). Only 2 weak plants. 18 plants strong and vigorous. Blooms good form, color, and substance. Three days earlier than imported bulbs.

Mixed Colors

Keizerkroon:

(1) Baartman & Koning, Sassenheim--5000 at \$5.20 for Congressional Distribution.

(a) Row of 20 on trial grounds. Very poor. Of the 20, 3 are very poor, 2 are weak, and 1 is blind, and all are weak and not attractive. Deduct ten per cent.

(b) Row of 10 at Cleveland Park (Mr. Tracy). Make much better showing than on trial grounds. Stock only fair. Give credit for better showing by making deduction only 5 per cent. Apr. 21, stems fully as long and flowers are large as Bellingham. 9 of them are certainly Al. The other (2) Rynveld Bros., Lisse--7500 at \$5.70, for Department Grounds and Congressional Distribution. good but small. I think no deduction.

(a) Bed west end of boiler-house. Very good stock. Vigorous plants; large blooms; true to name. Only 1 blind in 200.

(b) Long bed west of Main Building. Very large foliage. Blooms not quite as good as bed "a." Of 300 counted 36 were blinds and 3 weak, probably due to exposed situation.

(c) 10 at Cleveland Park. 7 days later than Bellingham. Good stock, but stems vary 13 to 18 in., making it unsuitable for bed purposes. No deduction, but firm should be advised that they are bad; and don't buy again. 10 good blooms.

(3) Bellingham-grown.

(a) Row of 13 on trial grounds. Blooms equal in quality to imported bulbs. Stems taller, and blooms a week earlier.

(b) Row of 10 at Cleveland Park. Larger blooms and a week earlier than imported. Stems 18 to 20 in. high.

Duchess de Parma:

(1) DeGraaf of Leiden--3600 at \$4.50, for Bellingham, and for Congressional Distribution.

(a) Row of 10 on trial grounds. Beautiful orange-red. Very good stock.

(b) Row of 10 at Cleveland Park. Good strong plants and blooms. Good stock.

(2) Rene Schoo, Hillegom--3600 at \$4.50, for Bellingham.

(a) Row of 10 on trial grounds. Not as good as the lot from DeGraaf. 4 small, weak blossoms. Plants weak and lacking in uniformity.

(b) Row of 10 at Cleveland Park. Poor stock, apparently mixed. Two types--one large and strong; the other small and weak. The blossoms of the smaller plants show less orange and have a trace of green. Deduct 10 per cent. Apr. 21, difference in quality and substance still more marked.

Orange

Thomas Moore:

(1) DeGraaf, Leiden, 4000 at \$3.50, for Bellingham. None on trial grounds or at Cleveland Park.

(2) Van Zanten, Lisse--12700 at \$2.50

(a) Row of 10 on trial grounds. A week later than the Virginia-grown. Not uniform in earliness or color.

(b) Row of 10 at Cleveland Park. Good stock, but 7 days later than Bellingham, and blooms not quite as large as Virginia-grown or Bellingham; but no deduction.

(3) Virginia-grown. Row of 20 at Cleveland Park. 4 days earlier than Van Zanten's and 3 days later than Bellingham. Excellent quality although 1 blind.



(a)--Cont'd. Not sufficiently defective to warrant deduction, but advise firm stock is not satisfactory.

(b) Row of 10 at Cleveland Park. Stock only fair. Stems 13 to 16 in. high.

(3) Hubert Bulb Co., Portsmouth, Va.--100 at \$9.25, for Congressional Distribution.

(a) Row of 20 on Trial Grounds. All good. Plants vigorous, blossoms attractive and true to type. Color as good as lot from Bellingham, and blooms 3 days earlier.

(b) Row of 10 at Cleveland Park. 1 blind. Stems 15 to 18 in. Blossoms not very good--rather weak. Four days earlier than imported bulbs. Three days later than Bellingham bulbs.

(4) Bellingham grown.

(a) Row of 10 on Trial Grounds. Very good but no better than those from Virginia. Earlier than imported bulbs, but 3 days later than the Virginia-grown.

(b) Row of 10 at Cleveland Park. Good stock and blossoms. A week earlier than the imported, and 3 days earlier than the Virginia-grown.

White

Albion (White Hawk):

From DeGraaf Bros., Leiden, 2500 at \$9 for Department Grounds. One long bed west of Main Building, and two square beds on upper terrace in front of Main Building. April 12, stems short and blossoms unsatisfactory because of lemon-yellow tinge. Cups large and petals rounded. April 16, stems 14 in.; blooms almost pure white; very attractive. Out of 900 counted 34 were blind and 13 weak. Good stock.

Pottebakker:

(1) DeGraaf, Leiden, 4000 at \$8 for Bellingham. None on trial grounds or at Cleveland Park.

(2) Bellingham grown.

(a) Row of 10 on trial grounds. Pure white. Good stock.

(b) Row of 10 at Cleveland Park. Stems 16 to 18 in. Large blooms; pure white, and good substance. A week earlier than the imported varieties.

La Reine:

Gt. Van Waveren, 4000 at \$5, for Congressional Distribution.
None on trial grounds.

L'Immaculee:

Van Zanten, 12050 at \$2.50, for Congressional Distribution.

(a) Row of 10 on trial grounds. Pure white; long petals.
Good stock; free from disease.

(b) Cleveland Park--same.

Pink

Epaminondas: (Substituted for Claremont Silver)

From DeGraaf, Leiden, 2500 at \$12, for Department Grounds.
Circular bed east of lunch room, west of Laboratory A, and
west terrace near 14th St. Rosy scarlet suffused with carmine
and purple, centers white and yellow; petals somewhat pointed.
April 12, stems short and blossoms pink. April 16, stems 14
in. and blossoms dark crimson. On bed east of lunch room, 2
blossoms half pink. Out of 400 counted only 1 was blind. Very
good stock.

Rose de Holland:

Rynveld, Lisse, 2500 at \$7, for Department Grounds. 3 circular
beds, one west of Laboratory A, one east side upper terrace in
front of main building, and one on west terrace near 14th.
April 12, very poor showing. Not a good white and only a faint
trace of pink. Blooms not uniform. April 16, stems and blos-
soms doubled in size. Blooms large, and petals well rounded,
with beautiful shade of pink. Good stock.

Cottage Maid:

(1) DeGraaf, Leiden, 4000 at \$4.50, for Bellingham. None
on trial grounds or at Cleveland Park.

(2) Rynveld, Lisse, 11700 at \$3.75 for Congressional Dis-
tribution.

(a) Row of 10 on trial grounds. Fairly good stock.
3 days later than Virginia-grown.

(b) Row of 10 at Cleveland Park. Vigorous plants;
attractive blossoms; good stock.

(3) Van Zanten, Lisse, 12500 at \$3.25, for Congressional
Distribution.

(a) Row of 10 on trial grounds. Very poor. Blossoms
small and weak, and foliage lacks vigor. Stems short.
Deduct 10 per cent.

1900
1901
1902

1903

1904

1905

1906

(b) Row of 10 at Cleveland Park. Better than on trial grounds. Credit better showing at this place, and make the deduction only 5 per cent. 4/21, Much improved. I cannot see but as good as other 2 firms. I think no deduction. (4) Hubert Bulb Co., Portsmouth, Va.--100 @ \$9.25, for Congressional Distribution.

(a) Row of 10 on trial grounds. Large, fine blooms. Good stock. The best of this variety on the grounds.

(b) Row of 10 at Cleveland Park. Very good but not so decidedly better than imported bulbs as appeared on the trial grounds. 4/21. Now appear no better than others. They were 2 days earlier in blooming.

Yellow

Golden Queen:

DeGraaf, Leiden, 2500 at \$12, for Department Grounds. One circular bed east of boiler-house, and one west side of lower terrace in front of Main Building. Large yellow blooms, with well rounded petals, some of which show a faint trace of red. Out of 525 counted, 9 were blind. Very attractive and good stock, but no better than Chrysolora or Yellow Prince.

Mon Tresor:

(1) DeGraaf, Leiden--4000 at \$6 for Bellingham. None on the trial grounds or at Cleveland Park.

(2) Bellingham-grown. Blossoms large. Pure yellow, and early, good stock.

Chrysolora:

(1) Rene Schoo, Hillegom--4700 at \$2.50, for Congressional Distribution.

(a) Row of 10 on trial grounds. Very good. Only 1 blind.

(b) Row of 10 at Cleveland Park. Good stock.

(2) Van Zanten, Lisse, 5000 at \$2.50, for Congressional Distribution.

(a) Row of 20 on trial grounds. Four blinds and two imperfectly developed. Stock fairly good.

(b) Row of 10 at Cleveland Park. Five good blossoms; three weak, but situation unfavorable.

(3) Verdegaal, Noordwijkerhouts--7200 at \$2.20, for Congressional Distribution.

11. 12. 13.

(a) Row of 20 on trial grounds. 2 did not come up and 7 were blind. Lacking in vigor and uniformity. Poor stock. Deduct 15 per cent.

(b) Row of 10 at Cleveland Park. 8 blossoms good. 2 weak, but situation unfavorable.

(4) Hubert Bulb Co., Portsmouth, Va., 100 at \$9.25, for Congressional Distribution.

(a) Row of 20 on trial grounds. Best of this variety on the grounds. Plants vigorous; blossoms large, well-formed, good color and substance. Good stock. Three days earlier than imported bulbs.

(b) Row of 10 at Cleveland Park. 8 good blossoms and 2 weak or backward.

(5) Bellingham-grown.

(a) Trial Grounds. Probably the lot labelled "Mon Tresor," which seems to be a mistake. See under "Mon Tresor."

April 19, 1912.

NARCISSUS

Emperor:

(1) Hubert Bulb Co., 100 at \$9.25, for comparative tests.

(a) Row of 20 on trial grounds. Vigorous, healthy foliage, large blossoms; of good form, color and substance. There are 11 doubles, 5 triples, 3 singles, and 1 missing. Earlier than imported. Excellent stock.

(b) Two rows of 10 at Cleveland Park. Good stock. There were 2 doubles, 6 triples, 1 single plant without any blossom, and 1 missing. Second row shows 3 singles, 4 doubles and 3 triples.

(2) Baartman & Koning, Sassenheim, 29000 at \$3.80, for Congressional Distribution.

(a) Row of 20 on trial grounds. Foliage small and weak. Blossoms one-third smaller than Virginia-grown. 2 are missing, 17 singles, and 1 double. Three plants appear to be diseased; leaves have yellowish brown spots and streaks. Inspect 4 days later for disease.

(b) Row of 10 at Cleveland Park. Each bulb gave only one stem and one blossom. No sign of disease, April 13.

4/21, Strong and no disease, longer trumpet and not as full
(3) Oscar D'Alcorn, Congress Heights, 2000 at \$10, for Congressional Distribution. ers as American-grown.

(a) Row of 20 on Trial Grounds. Plants vigorous; blossoms large, and of good color and substance. 12 doubles, 7 singles, and 1 undeveloped. Stock appears to be about the same as Hubert Bulb Co.

(b) Row of 10 at Cleveland Park. 1 single, 7 doubles, and 2 triple blossoms. Good stock.

(4) Rynveld Bros., Lisse, 4000 at \$7.50 for Department Grounds. Two narrow beds east and west side of upper terrace in front of Main Building, and a wide, crescent-shaped bed on western terrace near 14th St. Began to bloom, April 12. Bed west side upper terrace 4 days earlier and much more vigorous than bed on east side. Foliage and blossoms very good. Bed on west terrace has rank foliage which hides many of the flowers. Planted too thick for effect. Excellent stock.

Empress:

(1) Verdegaal, Noordwijkerhouts, 14000 at \$4.10 for Congressional Distribution.



(a) Row of 20 on trial grounds. Medium-sized foliage and blossoms. 7 doubles, 12 singles, 1 missing. No mixture. Fairly good stock.

(b) Row of 10 at Cleveland Park. Blossoms of good quality. 5 single, 5 double. Good quality.

(2) Hubert Bulb Co., Portsmouth, Va., 100 at \$9.25, for comparative tests.

(a) Row of 20 on Trial Grounds. Foliage and blossoms about the same as No. 1, but not as vigorous. Multiple blossoms as large as the singles. There are 12 doubles, 4 triples, 1 quadruple, and 3 mixture, which are Emperor. Good stock.

(b) Row of 20 at Cleveland Park. Good strong blossoms, and foliage. 17 doubles and 3 singles. Good stock. 3 days earlier than Verdegael.

(3) Baartman & Koning, Sassenheim, 13000 at \$3.30, for Congressional Distribution.

(a) Row of 20 on trial grounds. Apparently from 12 to 14 days late. Foliage small and no blossoms. Buds not sufficiently advanced to show color, while all others are in the last stage. Stock not satisfactory. Examine later.

(b) Row of 10 at Cleveland Park. While all of the other stocks are in full bloom, this lot is only about 4 in. high, and showed no sign of blooming, April 13. Apr. 21, no signs of buds although leaves 6 in. high.

(4) Oscar D'Alcorn, Congress Heights, D.C., 3000 at \$12, for Congressional Distribution.

(a) Row of 20 on Trial Grounds. Foliage and flowers very vigorous and large. 16 doubles and 4 singles. The single blossoms are considerably larger than the multiple ones. Excellent stock.

(b) Row of 10 at Cleveland Park. 9 doubles and 1 single. All good blossoms; strongest plants of any. About same in earliness as Virginia-grown, possibly 1 day earlier. Quality good.

Sir Watkin:

(1) From Bellingham.

(a) Row of 20 on trial grounds. Vigorous foliage. 15 double blossoms, 4 single, and 1 imperfectly developed. Stems very long. Flowers early and almost too far gone to judge of quality.

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(b) Row of 20 at Cleveland Park. Blossoms 7 days earlier than Emperor and Empress from D'Alcorn. Stems tall and blossoms attractive. 18 doubles, 1 triple, and only 1 single.

Barri Conspicuus:

(1) Bellingham-grown.

(a) Row of 20 on trial grounds. Vigorous foliage. Tall stems, which are about 20 in. high, and from 3 to 5 in. higher than imported. There are 5 triples, 12 doubles, 2 singles, and 1 missing. Flowers of good size, color and substance.

(b) Row of 20 at Cleveland Park. There are 13 triples, 6 doubles, and 1 single (52 blooms); first quality in every way. Stems average 18". Full bloom April 14, and now, Apr. 21, apparently as good as ever. Va. has but 2 bulbs blooming, Verdegaaal 2, others none. See photos.

(2) Rene Schoo, Hillegom, 28000 at \$1.50. Row of 20 on trial grounds. Both foliage and blossoms much smaller than Bellingham. Stems at least 5 in. shorter. There are 9 singles, 2 doubles, and 1 triple, 5 with nothing, and 3 skips. Blossoms and plants not uniform in color or size. Some blossoms very much yellower than others. Weak growth. Deduct 10 per cent.

(3) Verdegaaal, Noordwijkerhouts, 12000 at \$2.00, for Congressional Distribution.

(a) Row of 20 on Trial Grounds. Stock very much better than No. 2. There are 17 doubles, 2 triples, and 1 single. Strong plants and blossoms of good color, form, and substance. Fairly uniform. Probably 4 days later than Bellingham, and stems 2 to 3 in. shorter.

(4) Van Zanten, Lisse, 20000 at \$1.50, for Congressional Distribution. Row of 20 on trial grounds. There are 18 singles, 1 double, and 1 very weak plant with no sign of blossom. Stock only fair, and dealer should be advised.

(5) Baartman & Koning, Sassenheim, 28000 at \$1.60, for Congressional Distribution. Row of 20 on Trial Grounds. 15 plants, all single; five missing; and not vigorous. Stock only fair. Advise dealer.

(6) Hubert Bulb Co., Portsmouth, Va., 100 at \$9.25, for comparative tests. Row of 20 on Trial Grounds. There are 13 doubles, 5 singles, 1 weak and 1 missing. Stock only fair, and not as good as No. 3.

Poeticus Ornatus:

(1) Rene Schoo, Hillegom, 26000 at \$1.75, for Congressional Distribution.

(a) Row of 21 on trial grounds. There are 13 singles and 8 doubles. Foliage in good condition. Blossoms of good form, color, and substance. Plants not uniform. Some in blossom and some not. Fairly good stock.

(b) Row of 10 at Cleveland Park. April 13, just beginning to bloom, but not far enough advanced to judge of quality. Apr. 21, no advance. See later for deduction to be made.

(2) Hubert Bulb Co., Portsmouth, Va., 100 at \$9.25, for comparative tests.

(a) Row of 20 on trial grounds. There are 14 doubles, and 5 mixture, and 1 missing. The mixtures have yellow perianth and straight clipped-off trumpet, which is midway between Ornatus and Sir Watkin. The typical blossoms are of good color and substance, but the perianth segments are narrower and show more space between than those of No. 1.

(b) Row of 10 at Cleveland Park. April 13, not yet in bloom. Came into bloom April 18, giving 21 blooms from 15 bulbs. 5 other bulbs were other sorts. Too badly mixed for bedding. Could not use for Distribution. Quality good.

(3) Baartman & Koning, Sassenheim, 26000 at \$1.90, for Congressional Distribution.

(a) Row of 20 on Trial Grounds. 2 plants each have 1 bloom; 7 other plants came up and made weak, spindling growth. The remaining 11 plants did not grow. Exceedingly poor stock. According to this trial, we should deduct 50 per cent, and not purchase same variety from this firm again; but the trial of this same variety, selected at the same time and planted at Macomb St., showed a remarkable difference. In fact, it is one of the earliest of the Poeticus and is of excellent quality. All bulbs made a good, strong growth, 7 of which contained 2 spikes, 1 containing 1 spike with 2 full flowers on, and 2 containing 1 spike each. The flowers are of good shape, good color, and first quality in every respect.

(b) Row of 10 at Cleveland Park. Not in bloom, April 13. Bloomed Apr. 18; 2 singles, 8 doubles. Quality good.



(4) D'Alcorn, Congress Heights, D.C., 16000 at \$3.50, for Congressional Distribution.

(a) Row of 20 on Trial Grounds. 19 plants, but no blossoms. Reasonably vigorous growth, but small and look like slabs. About 14 beginning to show buds.

(b) Row of 10 at Cleveland Park. Not in bloom, April 13. Apr. 21, no sign of bloom except 1 Barri. Watch. By rights should deduct 100 per cent.

(5) Rynveld Bros., Lisse, 26000 at \$1.75, for Congressional Distribution, and Department Grounds.

(a) Circular bed west of lunch room. Tall stems. Flowers only fair. Out of 100, 16 had 2 flowers and 84, 1 flower. About 7 per cent had 2 flowers on one stem. 16 per cent have 2 stems from 1 bulb. 1 bulb gave light, yellow blossoms. Stock only fair.

(b) Circular bed west of creamery. Appears to be entirely different stock from bed "A." A week later; stems shorter; blossoms smaller, but of much better color, form, and substance. Stock fairly good.

(6) DeGraaf Bros., Cleveland Park. 10 sound roots, selected early and 10 late in season. No difference in performance. Each gave 8 blooms on Apr. 18. Good quality but plants weak, and 4 skips in 20.

Double Von Sion:

2000 at \$10 from DeGraaf, Leiden, for Department Grounds. Used for forcing in the Greenhouse.

Paper White:

5000 at \$5.50 from Rynveld Bros., Lisse, for Department Grounds. Used for forcing in greenhouse.

Golden Spur:

4000 at \$9 from DeGraaf, Leiden, for Department Grounds. Used for forcing in the greenhouse.

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Supplemental Notes, April 25, 1912.

Baartman and Koning

Emperor, row 20 on trial grounds. No sign of disease, but foliage spindling and weak. Through blossoming.

Empress, row 20 on trial grounds. About 10 just beginning to blossom. Stems not more than eight inches high, and not vigorous. Blossoms and foliage much below normal in size.

Rene Schoo

Barrii conspicuous, row 22 on trial grounds. Thirteen blossoms; only fair quality. Three doubles, one triple, four nothing, and one very weak.

April 29, 1912.

Baartman and Koning

Empress, row of 10 at Cleveland Park. These plants began to bloom today, April 29, there being 9 singles and one double. All flowers are of fairly good size but the trumpets are smaller, straighter and less fluted than the type. The color is several shades lighter than other stocks of the same variety. Seems probable that it is not a true Empress but a good bi-color very late in blooming.

PLAN OF TRIAL GROUNDS, SPRING of 1912.

HYACINTHS

<u>Grand Vainqueur (Gt. Van Wavoren)</u>	:	
<u>Baron von Thuyll, White (Verdegaal)</u>	:	
<u>Chas. Dickens, Pink (Rynveld)</u>	:	<u>Mont Blanc (Rynveld)</u>
<u>Roi des Belges (Rynveld)</u>	:	<u>La Grandesse (Segers)</u>
<u>Chas. Dickens, Blue (Segers)</u>	:	<u>Snowball (Rynveld)</u>
<u>Alba Superbissima (Guldemon)</u>	:	<u>Paix de L'Europe (Rynveld)</u>
<u>Baron von Thuyll, Pink (Verdegaal)</u>	:	<u>King of Blues (Segers)</u>
<u>Lord Derby (Rynveld)</u>	:	<u>Alba Maxima (Gt. Van Wavoren)</u>
<u>Lady Plimsoll (Gt. Van Wavoren)</u>	:	<u>Robt. Steiger, Red (Guldemon)</u>
<u>Queen of Blues (Rynveld)</u>	:	<u>Enchantress (Guldemon)</u>
<u>Gigantea, Pink (Rynveld)</u>	:	<u>Grand Lilas (Segers)</u>
<u>L'Innocence (Rynveld)</u>	:	<u>Mad. van der Hoop (Guldemon)</u>
<u>Gertrude, Red (Segers)</u>	:	<u>British Queen (Rynveld)</u>
<u>Grand Maitre (Rynveld)</u>	:	<u>Norma (Rynveld)</u>
<u>Moreno (Rynveld)</u>	:	<u>Gen. Hancock (Verdegaal)</u>

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PLAN OF TRIAL GROUNDS, Spring, 1912.

TULIPS

Chrysolora (Rene Schoo	:	Chrysolora
Chrysolora)	:	Virginia-grown
Va.-grown) continued	:	Artus (Rynveld)
Artus--continued	:	L'Immaculee (Van Zanten)
L'Immaculee: Mixed Bellingham: Keizerkroon; Mon Tresor; Pottebakker,		
continued : White; Thos. Moore.	'1'	
'1'--continued		
'1'--continued		
'1'--continued	:	Cottage Maid (Van Zanten)
Cottage Maid--	:	
continued	:	Cottage Maid (Hubert)
Cot. Maid, :	:	Chrysolora
Hub. cont'd: Crimson King (Rene Schoo)	:	(Verdegaal)
Chrysolora (cont'd)	:	Artus (DeGraaf)
Artus (DeGraaf) cont'd	:	Artus (Hubert)
Artus (Hubert) cont'd	:	Keizerkroon (Baartman & Koning)
Keizerkroon (cont'd) :	:	Cottage Maid (Rynveld)
Cot. Maid;	:	Thos. Moore
cont'd : Chrysolora (Van Zanten)	:	(Van Zanten)
Thomas Moore (cont'd)	:	Keizerkroon
	:	(Rynveld)
Keizerkroon (cont'd)	:	Artus (Verdegaal)
Artus (cont'd)	:	Duchess de Parma (DeGraaf)
Duchess de Parma	:	
(Cont'd)	:	Duchess de Parma (Rene Schoo)
Thomas Moore (Hubert)	:	Empress
	:	(Verdegaal)
Empress (cont'd)	:	Sir Watkin
	:	(Bellingham)
Sir Watkin :	:	Emperor
cont'd : Barrii Conspicuous (Bellingham)	:	(Verdegaal)
Emperor--cont'd	:	Sir Watkin
	:	(Bellingham)
Sir Watkin--cont'd	:	Empress (Hubert)
Empress :	:	Poeticus
cont'd : Barri Conspicuous (Rene Schoo)	:	(Baartman & K.)
Poeticus --cont'd	:	Emperor
	:	(Baartman & K.)

TULIPS

Emperor (cont'd)	:	Poeticus Ornatus--Hubert
Poeticus ornatus (cont'd)	:	Barri Conspicuous (Verdegaal)
Barri Conspicuous (cont'd)	:	Barri Conspicuous (Hubert)
Barri Conspicuous (H) cont'd:	:	Poeticus Ornatus (Rene Schoo)
Poeticus orna-:	:	
tus--cont'd	:	Barri Conspicuous (Van Zanten
Barri Conspicuous (Baartman & Koning)	:	Empress
	:	Baartman & K.
Empress (cont'd)	:	Empress (D'Alcorn)
Empress (D'Alcorn) cont'd	:	Emperor (D'Alcorn)
Emperor (cont'd)	:	Poeticus (D'Alcorn)
Poeticus (cont'd)	:	

1875

1875

Hyscinths on Trial Grounds, April 30, 1913.



No. 9633 - Competitive test of each lot of hyscinths introduced in 1911 on trial grounds south of central station at Department, near H St.



No. 9645 - Hyscinths, Loreno (pink), from Segers Brothers, Lisse, Holland, at \$45.00 per 1000.



No. 9648 - Long bed of hyacinths in front of upper terrace north of Main Building.

- (a) King of the Blues from Rynveld Brothers, Lisse, Holland, at \$45.00 per 1000.
- (b) L'Innocence (white), from Segers Brothers, Lisse, Holland, at \$50.00 per 1000.
- (c) Moreno (pink), from Segers Brothers, Lisse, Holland, at \$45.00 per 1000.



Circular bed of Moreno on Department Grounds, near Lunch Room.

Hyacinths on Trial Grounds, April 20, 1912.



No. 9645 - Specimen blossom Grand Maître, from Rynveld Brothers,
Lisse, Holland.



No. 9632 - Circular bed of *Spaninondas* (dark pink), from De Graff Bros., Leyden, Holland, at \$20.00 per 1000. West side, lower terrace, near 14th Street.



No. 9651 - Circular bed of *Grace Darling* (scarlet) from De Graff Bros., at \$16.00 per 1000, at north-east corner of laboratory "B".





No. 9626 - Circular bed of Golden Queen from De Graff, Leyden, Holland, at \$12.00 per 1000. West side of lower terrace front Main Bldg.



No. 9640 - Circular bed of Joost von Vendel (pink fringed with white) from De Graff Bros., Leyden, Holland, at \$8.00 per 1000. On east side of lower terrace in front of Main Building.





No. 9646 - One of two square beds of Albion (White Hawk) from De Graff Brothers, Leyden, Holland, at \$9.00 per 1000. On upper terrace in front of Main Building. Second bed of same variety in the distance.



No. 9629 - Circular bed of Rose de Holland, from Rynveld Bros., Lisse, Holland, at \$7.00 per 1000. On upper terrace in front of Main Building. Circular bed of Grace Darling (scarlet) in the distance.



Tulips on Department Grounds, April 20, 1912.

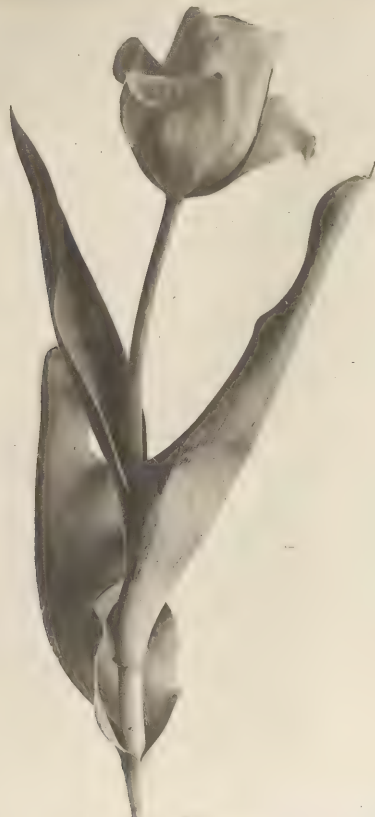


No. 9533 - Bed of Kaiser kroons (mixed colors) from Baartman & Koning, at \$5.20 per 1000. South of Laboratory "B" near power house.



Rose de Holland

No. 9644 - Specimen blossom Rose de Holland (white suffused with pink) from Rynveld Bros., Lisse, Holland, at \$7.00 per 1000.



Golden Queen

No. 9639 - Specimen blossom Golden Queen (pure yellow), from De Graff Bros., Leyden, Holland, at \$12.00 per 1000.



Eraninondas

No. 9634 - Specimen blossom Eraninondas (deep rosy red, substituted for Claremont, silver), from De Graff Bros., Leyden, Holland, at \$12.00 per 1000.



Tulips on Department Grounds, April 20, 1912.



No. 9635
(orange),

vars. red and
or 1000.



No. 9635 - Specimen blossom Albion, or White Hawk (pure white).
From De Graff Bros., Leyden, Holland, at \$3.00 per 1000.



No. 9620 - Specimen blossom Joost von Vondel (mixed red and white) from De Graff Bros., Leyden, Holland, at \$8.00 per 1000.



No. 9627 - Specimen blossom Grace Darling (deep scarlet) from De Graff Bros., Leyden, Holland, at \$16.00 per 1000.



Tulip Bulbs at Cleveland Park showing earliness of Bellingham
Bulbs in comparison with imported bulbs. April 13, 1912.



1875
1876



No. 9641 - long bed of *Narcissus*, west side upper terrace in front of Main Building, from Rynvold Bros., Lisse, Holland, at \$7.50 per 1000.



No. 9647 - Near view of individual plants in row of No. 9641.





No. 3647 - Crescent shaped bed of *Superior* on west side lower terrace near 14th Street. from Rywold Bros., Misso. at \$7.50 per 1000.



No. 3637 - Circular bed of *lucicola ornatus*, near lunch room, from Rywold Bros., Misso, Holland, at \$1.75 per 1000.



No. 9626 - Emperor from Rynveld Bros., Lisse, Holland, at \$7.50 per 1000.



No. 9625 - Sir Watkin, from Bollingham Garden, Washington.



No. 2636 - *Basil conspicuus*, from P. Verdoorn, Noordwijkerhout, Holland, at \$2.00 per 1000.



No. 2637 - *Centurus ornatus*, from Rynveld Bros., Lisse, Holland, at \$1.75 per 1000.



Narcissus on Department Grounds, April 20, 1912.



No. 9643 - Specimen blossoms of Emperor on the left, barii conspicuus in the center, and poeticus ornatus on the right.





No. 9607 - Volunteer narcissus, *barri* conspicuus, and tulips, artus and college maid, from Arlington Farm, grown without cultivation. The narcissus blossoms are equal in quality to any imported bulbs, but the tulips are inferior as shown by short stems and pointed leaves. Secured April 16, 1912, by Mr. W. W. Tracy, Sr.

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Samples of different stocks of narcissus grown on trial grounds at Cleveland Park (by J. M. S. Tracy), showing comparative vigor, length of stems, and earliness of bloom, of imported stocks, Virginia grown bulbs, and bulbs grown at Bellingham, Washington.



Estabrook, Leo
Notes on trial
purchased for
tion, April, 19

8-2432

